IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE HONORABLE BOARD OF PATENT APPEALS AND INTERFERENCES

In re the Application of

Xing LI et al.	Group Art Unit: 2624
Application No.: 10/709,833	Examiner: A. WOLDEMARIAM
Filed: June 1, 2004	Docket No.: 119021

For: SYSTEMS AND METHODS FOR ADJUSTING PIXEL CLASSIFICATION USING
        BACKGROUND DETECTION

REPLY BRIEF

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

The following remarks are directed to points of argument raised in the Examiner's

Answer dated March 5, 2010.

The Examiner's Answer merely lists the arguments contained in the Appeal Brief filed

October 8, 2009 and for each argument indicates "the Examiner respectfully disagrees."

Appellants' Brief on Appeal specifically argued that Lin in view of what is asserted to

be Appellants' "Admitted Prior Art" (AAPA) would not have rendered obvious "the

background intensity level being based on substantially all of the pixels of the image," as

recited in claims 1, and similarly recited in claim 8, and "determining a background intensity

level of an image, the background level being based on substantially all of the pixels of the

image," as recited in claim 15. The Examiner's Answer cites to the Description of Related

Art section of Appellants' specification at paragraph [0012] as allegedly disclosing these features.

As argued in Appellants' Appeal Brief, at pages 18-21, paragraph [0012] of the application's Description of Related Art section discloses "conventionally, background detection is performed by <u>sampling</u> pixel values" (emphasis added). This use of "sampling" in Appellants' specification is consistent with its commonly understood meaning to refer to "a portion, part, or segment." Appellants' specification is consistent with this ordinary meaning of "sampling."

Appellants discovered that pixel classification of pixels is improved when pixels are classified based on substantially <u>all</u> of the pixels of an image, and not just on a sampling. In the Description of Related Art section of the specification, Appellants' describe known methods that only include pixel classification based on "sampling." In rejecting Appellants' claims, the Final Rejection wholly relies on this portion of Appellants' specification as disclosing the above-quoted features.

Appellants' specification particularly distinguishes between detection methodologies based on "sampling" and "substantially all" pixels. For example, paragraph [0056], discloses "the background intensity level of the image is determined based on an analysis of <u>substantially all</u> of the pixels of the document, and <u>not just a sampling</u> of the pixels or a sub-region of the image" (emphasis added). That is, Appellants' specification is plain in its indication that one of ordinary skill in the art would recognize the ordinary meaning of "sampling" as contrary to "substantially all." Thus, the alleged "AAPA" cannot reasonably be interpreted to render obvious the above-quoted features of claims 1, 8 and 15. Appellants' specification specifically distinguishes between "sampling" and "substantially all." Further, "substantially all" could not reasonably be interpreted to correspond to "sampling" based at least on the ordinary meaning of these words.

Appellants' Brief on Appeal also specifically argued that Lin in view of "AAPA" would not have rendered obvious "determining if reclassification is required," as recited in claims 1 and 8, and "reclassifying pixels based on results of the checking step," as recited in claim 15. Appellants' argued that the February 2, 2009 Final Rejection and April 14, 2009 Advisory Action fail to respond to Appellants' arguments that Lin teaches away from these features, the Examiner's Answer merely cites to the same reasons given in the Final Rejection and indicates that "Examiner respectfully disagrees."

As specifically argued in Appellants' Brief on Appeal, on pages 22-25, Lin discloses that during the first pass of the pixels, micro-detection and macro-detection results are not recorded for each pixel of the image. In this regard, reclassification of the pixels in Lin is not possible because Lin cannot revisit the micro-detection and macro-detection data for each pixel after it is classified, e.g., paragraph [0060] of Lin. Lin specifically teaches that not including memory to store these macro-detection and micro-detection results of each pixel lowers the cost of a device embodying the Lin invention. That is, Lin does not store the micro-detection and macro-detection results for the pixels, which would later be used to reclassify the pixels rendering pixel reclassification impossible.

Appellants' specification explicitly acknowledges the existence of systems such as Lin's and distinguishes such systems. For example, paragraph [0013] of Appellants disclosure, states "[i]n known two-pass methods, for example, the original classification of a pixel as background is done during the first pass using lead-edge or other sub-region information and pixels misclassified as background during the first pass are not re-classified during the second pass." Because Lin's system cannot reclassify pixels due to the lack of memory, Lin discloses a known method specifically acknowledged and distinguished by Appellants' specification. Appellants' specification at paragraph [0013] specifically acknowledges, "in known classification methods, the classification of a pixel is <u>not</u>

reconsidered," (emphasis added). As indicated above, at least at paragraph [0060], Lin specifically teaches, "because the micro-detection and macro-detection results from the first pass are <u>not</u> recorded for each pixel of the image, the memory requirements for a device embodying the invention are minimized." That is, Lin cannot reasonably be interpreted to disclose "determining if reclassification is required," as recited in claims 1 and 8 and "reclassifying pixels based on results of the checking step," as recited in claim 15 because Lin lacks the memory to store data for the pixels.

Finally, Appellants' Brief on Appeal specifically argues that Lin teaches away from the above-quoted features by teaching to exclude memory from a device embodying the invention to minimize costs. That is, because Lin specifically teaches to not record the micro-detection and macro-detection data, to minimize the cost of a device embodying the invention, Lin cannot reasonably be interpreted to disclose the above-quoted features of claims 1, 8 and 15. Without the memory, Lin would not be able to revisit the classification of each pixel.

Claims 2-7, 9-14 and 16-22 depend either directly or indirectly from one of independent claims 1, 8 and 15. Claims 2-7, 9-14 and 16-22 are thus patentable at least for their dependency from their respective independent claims, as well as for the additional features they recite.

For all of the reasons discussed above, it is respectfully submitted that the rejections are in error and that claims 1-22 are in condition for allowance. For all of the above reasons, supplementing and/or emphasizing the detailed arguments set forth in Appellants' Brief on Appeal, Appellants respectfully request this Honorable Board to reverse the rejection of claims 1-22.

Respectfully submitted,

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